

HCV Genome and Recombinant Proteins

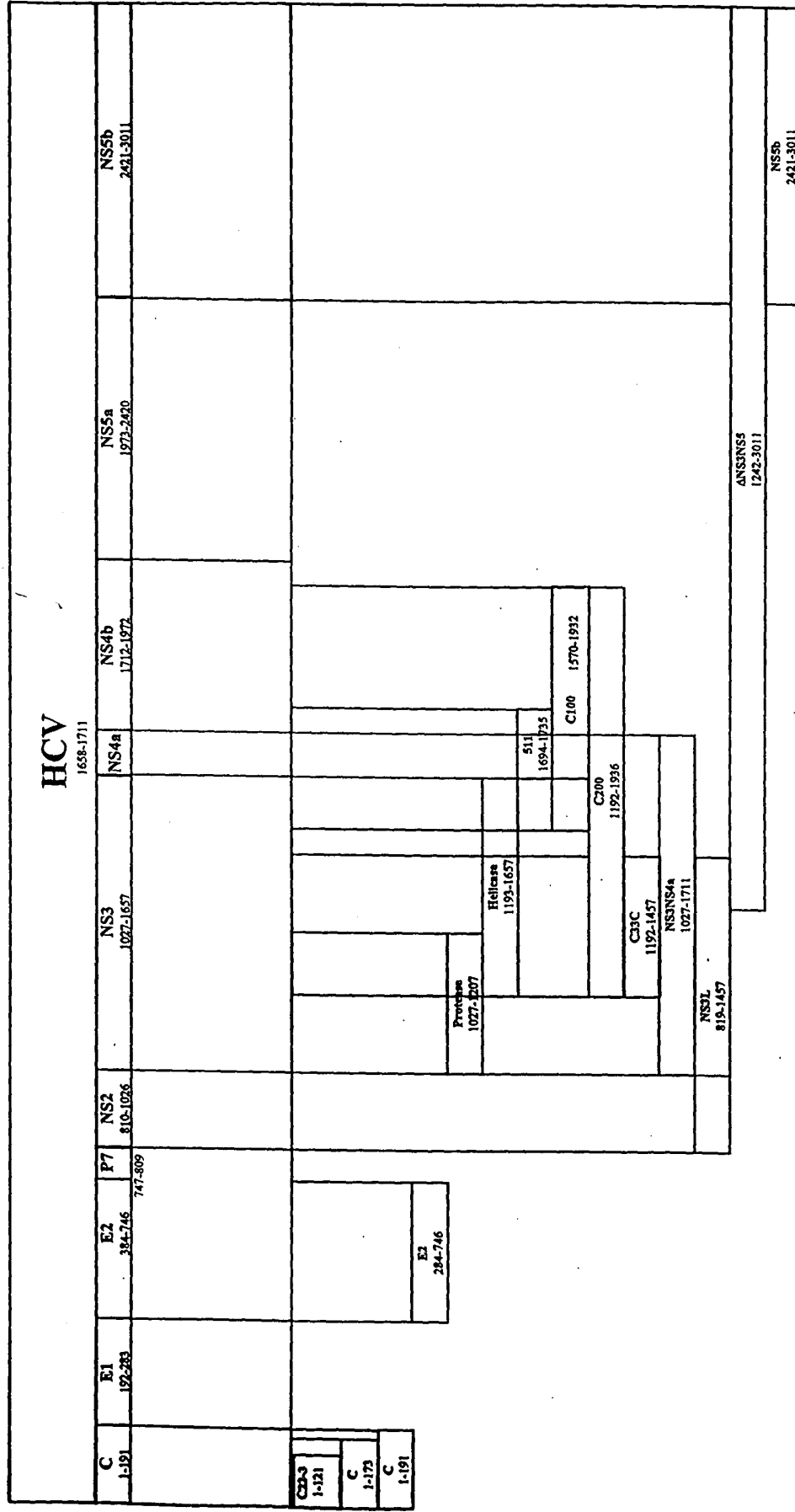


FIG. 1

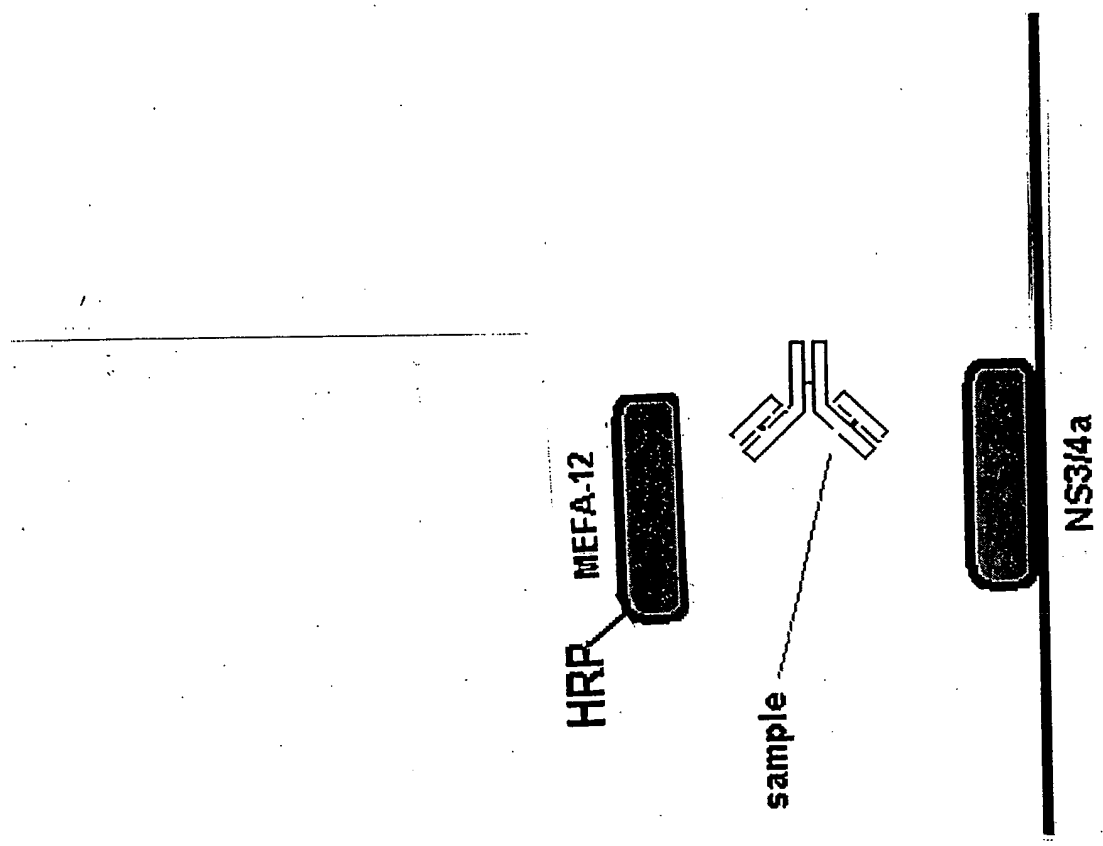


FIG. 2

200
 P P V V P Q S F Q V A H L H A
 CCA CCA GTA GTG CCC CAG AGC TTC CAG GTG GCT CAC CTC CAT GCT

210 220
 P T G S G K S T K V P A A Y A
 CCC ACA GGC AGC GGC AAA AGC ACC AAG GTC CCG GCT GCA TAT GCA

230
 A Q G Y K V L V L N P S V A A
 GCT CAG GGC TAT AAG GTG CTA GTA CTC AAC CCC TCT GTT GCT GCA

240 250
 T L G F G A Y M S K A H G I D
 ACA CTG GGC TTT GGT GCT TAC ATG TCC AAG GCT CAT GGG ATC GAT

260
 P N I R T G V R T I T T G S P
 CCT AAC ATC AGG ACC GGG GTG AGA ACA ATT ACC ACT GGC AGC CCC

270 280
 I T Y S T Y G K F L A D G G C
 ATC ACG TAC TCC ACC TAC GGC AAG TTC CTT GCC GAC GGC GGG TGC

290
 S G G A Y D I I I C D E C H S
 TCG GGG GGC GCT TAT GAC ATA ATA ATT TGT GAC GAG TGC CAC TCC

300 310
 T D A T S I L G I G T V L D Q
 ACG GAT GCC ACA TCC ATC TTG GGC ATT GGC ACT GTC CTT GAC CAA

320
 A E T A G A R L V V L A T A T
 GCA GAG ACT GCG GGG GCG AGA CTG GTT GTG CTC GCC ACC GCC ACC

330 340
 P P G S V T V P H P N I E E V
 CCT CCG GGC TCC GTC ACT GTG CCC CAT CCC AAC ATC GAG GAG GTT

350
 A L S T T G E I P F Y G K A I
 GCT CTG TCC ACC ACC GGA GAG ATC CCT TTT TAC GGC AAG GCT ATC

360 370
 P L E V I K G G R H L I F C H
 CCC CTC GAA GTA ATC AAG GGG GGG AGA CAT CTC ATC TTC TGT CAT

380
 S K K K C D E L A A K L V A L
 TCA AAG AAG AAG TGC GAC GAA CTC GCC GCA AAG CTG GTC GCA TTG

FIG. 3B

390 400
 G I N A V A Y Y R G L D V S V
 GGC ATC AAT GCC GTG GCC TAC TAC CGC GGT CTT GAC GTG TCC GTC

410
 I P P I G D V V V V A T D A L
 ATC CCG CCC ATC GGC GAT GTT GTC GTC GTG GCA ACC GAT GCC CTC

420 430
 M T G Y T G D F D S V I D C N
 ATG ACC GGC TAT ACC GGC GAC TTC GAC TCG GTG ATA GAC TGC AAT

440
 T C V T Q T V D F S L D P T F
 ACG TGT GTC ACC CAG ACA GTC GAT TTC AGC CTT GAC CCT ACC TTC

450 460
 T I E T I T L P Q D A V S R T
 ACC ATT GAG ACA ATC ACG CTC CCC CAA GAT GCT GTC TCC CGC ACT

470
 Q R R G R T G R G K P G I Y R
 CAA CGT CGG GGC AGG ACT GGC AGG GGG AAG CCA GGC ATC TAC AGA

480 490
 F V A P G E R P S G M F D S S
 TTT GTG GCA CCG GGG GAG CGC CCC TCC GGC ATG TTC GAC TCG TCC

500
 V L C E C Y D A G C A W Y E L
 GTC CTC TGT GAG TGC TAT GAC GCA GGC TGT GCT TGG TAT GAG CTC

510 520
 T P A E T T V R L R A Y M N T
 ACG CCC GCC GAG ACT ACA GTT AGG CTA CGA GCG TAC ATG AAC ACC

530
 P G L P V C Q D H L E F W E G
 CCG GGG CTT CCC GTG TGC CAG GAC CAT CTT GAA TTT TGG GAG GGC

540 550
 V F T G L T H I D A H F L S Q
 GTC TTT ACA GGC CTC ACT CAT ATA GAT GCC CAC TTT CTA TCC CAG

560
 T K Q S G E N L P Y L V A Y Q
 ACA AAG CAG AGT GGG GAG AAC CTT CCT TAC CTG GTA GCG TAC CAA

570 580
 A T V C A R A Q A P P P S W D
 GCC ACC GTG TGC GCT AGG GCT CAA GCC CCT CCC CCA TCG TGG GAC

FIG. 3C

590
 Q M W K C L I R L K P T L H G
 CAG ATG TGG AAG TGT TTG ATT CGC CTC AAG CCC ACC CTC CAT GGG

600 610
 P T P L L Y R L G A V Q N E I
 CCA ACA CCC CTG CTA TAC AGA CTG GGC GCT GTT CAG AAT GAA ATC

620
 T L T H P V T K Y I M T C M S
 ACC CTG ACG CAC CCA GTC ACC AAA TAC ATC ATG ACA TGC ATG TCG

630 640
 A D L E V V T S T W V L V G G
 GCC GAC CTG GAG GTC GTC ACG AGC ACC TGG GTG CTC GTT GGC GGC

650
 V L A A L A A Y C L S T G C V
 GTC CTG GCT GCT TTG GCC GCG TAT TGC CTG TCA ACA GGC TGC GTG

660 670
 V I V G R V V L S G K P A I I
 GTC ATA GTG GGC AGG GTC GTC TTG TCC GGG AAG CCG GCA ATC ATA

680
 P D R E V L Y R E F D E M E E
 CCT GAC AGG GAA GTC CTC TAC CGA GAG TTC GAT GAG ATG GAA GAG

686
 C
 TGC

FIG. 3D

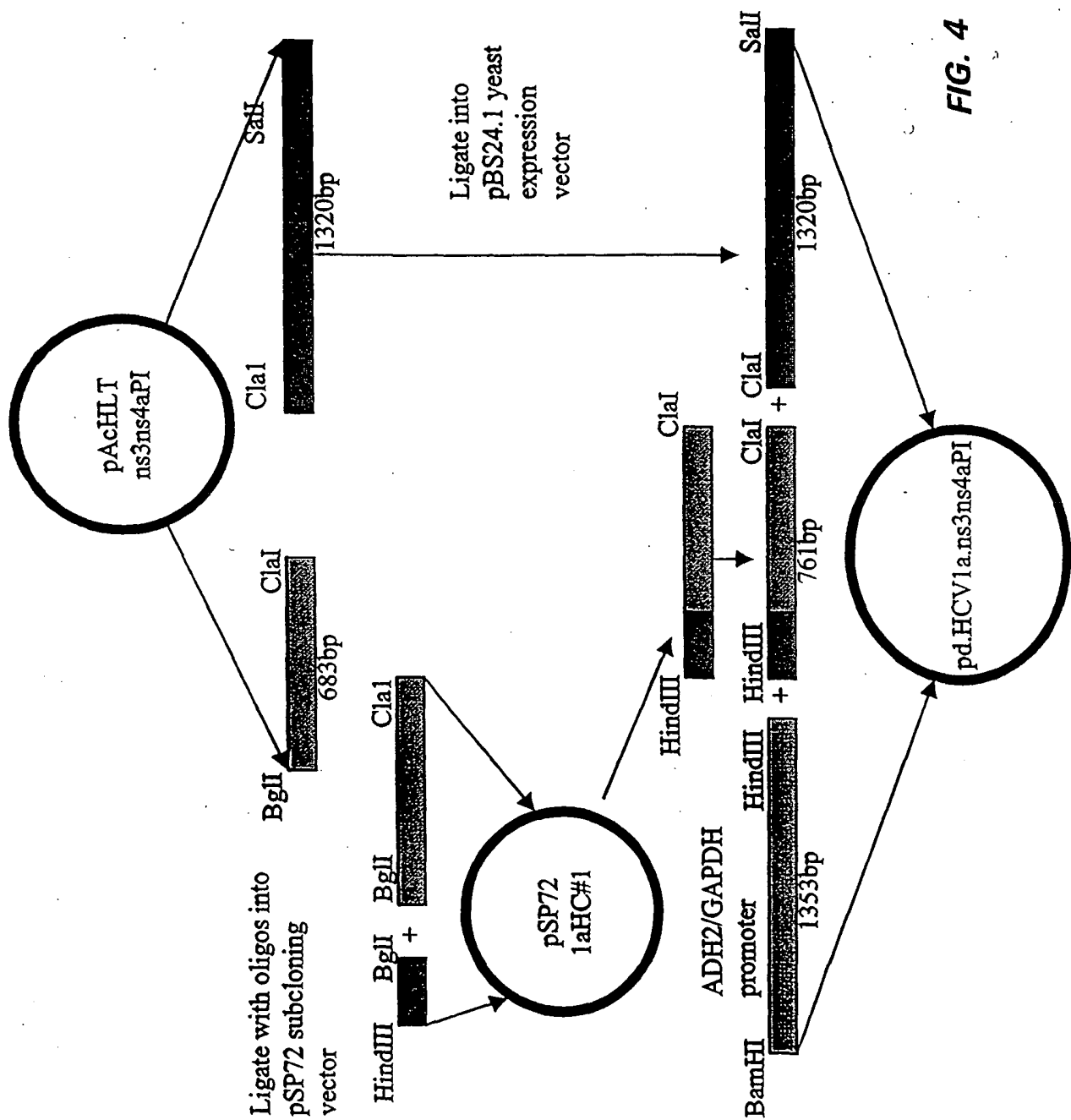


FIG. 4

MEFA 12 Antigen Construct

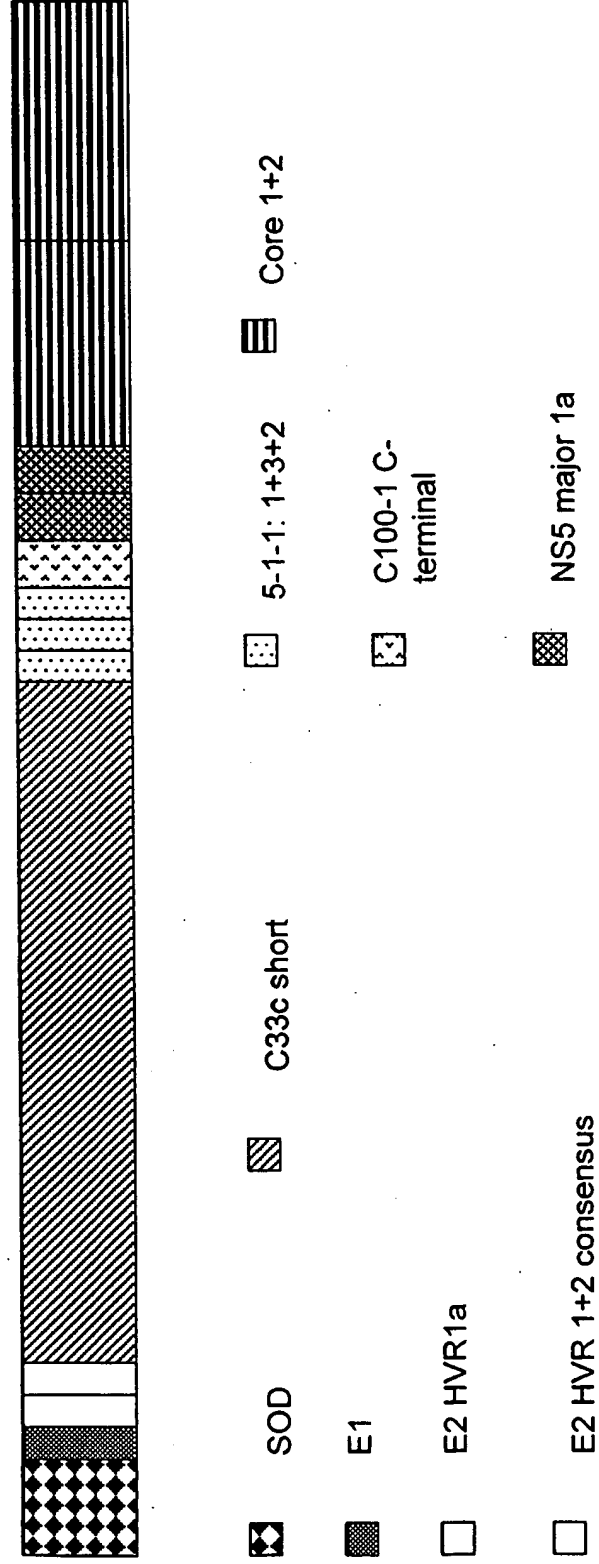


FIG. 5

1									10								
M	A	T	K	A	V	C	V	L	K	G	D	G	P	V			
ATG	GCT	ACA	AAG	GCT	GTT	TGT	GTT	TTG	AAG	GGT	GAC	GGC	CCA	GTT	45		
				20											30		
Q	G	I	I	N	F	E	Q	K	E	S	N	G	P	V			
CAA	GGT	ATT	ATT	AAC	TTC	GAG	CAG	AAG	GAA	AGT	AAT	GGA	CCA	GTG	90		
									40								
K	V	W	G	S	I	K	G	L	T	E	G	L	H	G			
AAG	GTG	TGG	GGA	AGC	ATT	AAA	GGA	CTG	ACT	GAA	GGC	CTG	CAT	GGA	135		
				50											60		
F	H	V	H	E	F	G	D	N	T	A	G	C	T	S			
TTC	CAT	GTT	CAT	GAG	TTT	GGA	GAT	AAT	ACA	GCA	GGC	TGT	ACC	AGT	180		
									70								
A	G	P	H	F	N	P	L	S	T	R	G	C	N	C			
GCA	GGT	CCT	CAC	TTT	AAT	CCT	CTA	TCC	ACG	CGT	GGT	TGC	AAT	TGC	225		
				80											90		
S	I	Y	P	G	H	I	T	G	H	R	M	A	W	K			
TCT	ATC	TAT	CCC	GGC	CAT	ATA	ACG	GGT	CAC	CGC	ATG	GCA	TGG	AAG	270		
									100								
L	G	S	A	A	R	T	T	S	G	F	V	S	L	F			
CTT	GGT	TCC	GCC	GCC	AGA	ACT	ACC	TCG	GGC	TTT	GTC	TCC	TTG	TTC	315		
				110											120		
A	P	G	A	K	Q	N	E	T	H	V	T	G	G	A			
GCC	CCA	GGT	GCC	AAA	CAA	AAC	GAA	ACT	CAC	GTC	ACG	GGA	GGC	GCA	360		
									130								
A	A	R	T	T	S	G	L	T	S	L	F	S	P	G			
GCC	GCC	CGA	ACT	ACG	TCT	GGG	TTG	ACC	TCT	TTG	TTC	TCC	CCA	GGT	405		

FIG. 6A

				140										150	
A	S	Q	N	I	Q	L	I	T	S	T	D	N	S	S	
GCC	AGC	CAA	AAC	ATT	CAA	TTG	ATT	ACT	AGT	ACG	GAT	AAC	TCC	TCT	450
									160						
P	P	V	V	P	Q	S	F	Q	V	A	H	L	H	A	
CCA	CCA	GTA	GTG	CCC	CAG	AGC	TTC	CAG	GTG	GCT	CAC	CTC	CAT	GCT	495
				170										180	
P	T	G	S	G	K	S	T	K	V	P	A	A	Y	A	
CCC	ACA	GGC	AGC	GGC	AAA	AGC	ACC	AAG	GTC	CCG	GCT	GCA	TAT	GCA	540
									190						
A	Q	G	Y	K	V	L	V	L	N	P	S	V	A	A	
GCT	CAG	GGC	TAT	AAG	GTG	CTA	GTA	CTC	AAC	CCC	TCT	GTT	GCT	GCA	585
				200										210	
T	L	G	F	G	A	Y	M	S	K	A	H	G	I	D	
ACA	CTG	GGC	TTT	GGT	GCT	TAC	ATG	TCC	AAG	GCT	CAT	GGG	ATC	GAT	630
									220						
P	N	I	R	T	G	V	R	T	I	T	T	G	S	P	
CCT	AAC	ATC	AGG	ACC	GGG	GTG	AGA	ACA	ATT	ACC	ACT	GGC	AGC	CCC	675
				230										240	
I	T	Y	S	T	Y	G	K	F	L	A	D	G	G	C	
ATC	ACG	TAC	TCC	ACC	TAC	GGC	AAG	TTC	CTT	GCC	GAC	GGC	GGG	TGC	720
									250						
S	G	G	A	Y	D	I	I	I	C	D	E	C	H	S	
TCG	GGG	GGC	GCT	TAT	GAC	ATA	ATA	ATT	TGT	GAC	GAG	TGC	CAC	TCC	765
				260										270	
T	D	A	T	S	I	L	G	I	G	T	V	L	D	Q	
ACG	GAT	GCC	ACA	TCC	ATC	TTG	GGC	ATC	GGC	ACT	GTC	CTT	GAC	CAA	810
									280						
A	E	T	A	G	A	R	L	V	V	L	A	T	A	T	
GCA	GAG	ACT	GCG	GGG	GCG	AGA	CTG	GTT	GTG	CTC	GCC	ACC	GCC	ACC	855
				290										300	
P	P	G	S	V	T	V	P	H	P	N	I	E	E	V	
CCT	CCG	GGC	TCC	GTC	ACT	GTG	CCC	CAT	CCC	AAC	ATC	GAG	GAG	GTT	900

FIG. 6B

														310	
A	L	S	T	T	G	E	I	P	F	Y	G	K	A	I	
GCT	CTG	TCC	ACC	ACC	GGA	GAG	ATC	CCT	TTT	TAC	GGC	AAG	GCT	ATC	945
														320	
P	L	E	V	I	K	G	G	R	H	L	I	F	C	H	
CCC	CTC	GAA	GTA	ATC	AAG	GGG	GGG	AGA	CAT	CTC	ATC	TTC	TGT	CAT	990
														340	
S	K	K	K	C	D	E	L	A	A	K	L	V	A	L	
TCA	AAG	AAG	AAG	TGC	GAC	GAA	CTC	GCC	GCA	AAG	CTG	GTC	GCA	TTG	1035
														350	
G	I	N	A	V	A	Y	Y	R	G	L	D	V	S	V	
GGC	ATC	AAT	GCC	GTG	GCC	TAC	TAC	CGC	GGT	CTT	GAC	GTG	TCC	GTC	1080
														370	
I	P	T	S	G	D	V	V	V	V	A	T	D	A	L	
ATC	CCG	ACC	AGC	GGC	GAT	GTT	GTC	GTC	GTG	GCA	ACC	GAT	GCC	CTC	1125
														380	
M	T	G	Y	T	G	D	F	D	S	V	I	D	C	N	
ATG	ACC	GGC	TAT	ACC	GGC	GAC	TTC	GAC	TCG	GTG	ATA	GAC	TGC	AAT	1170
														400	
T	C	A	C	S	G	K	P	A	I	I	P	D	R	E	
ACG	TGT	GCA	TGC	TCC	GGG	AAG	CCG	GCA	ATC	ATA	CCT	GAC	AGG	GAA	1215
														410	
V	L	Y	R	E	F	D	E	M	E	E	C	S	Q	H	
GTC	CTC	TAC	CGA	GAG	TTC	GAT	GAG	ATG	GAA	GAG	TGC	TCT	CAG	CAC	1260
														430	
L	P	Y	I	E	Q	G	M	M	L	A	E	Q	F	K	
TTA	CCG	TAC	ATC	GAG	CAA	GGG	ATG	ATG	CTC	GCC	GAG	CAG	TTC	AAG	1305
														440	
Q	K	A	L	G	L	S	R	G	G	K	P	A	I	V	
CAG	AAG	GCC	CTC	GGC	CTC	TCG	CGA	GGG	GGC	AAG	CCG	GCA	ATC	GTT	1350
														460	
P	D	K	E	V	L	Y	Q	Q	Y	D	E	M	E	E	
CCA	GAC	AAA	GAG	GTG	TTG	TAT	CAA	CAA	TAC	GAT	GAG	ATG	GAA	GAG	1395

FIG. 6C

640															
P	D	Y	N	P	P	L	V	E	T	W	K	K	P	D	
CCG	GAC	TAT	AAC	CCC	CCG	CTA	GTG	GAG	ACG	TGG	AAA	AAG	CCC	GAC	1935
650															660
Y	E	P	P	V	V	H	G	R	K	T	K	R	N	T	
TAC	GAA	CCA	CCT	GTG	GTC	CAT	GGC	AGA	AAG	ACC	AAA	CGT	AAC	ACC	1980
670															
N	R	R	P	Q	D	V	K	F	P	G	G	G	Q	I	
AAC	CGG	CGG	CCG	CAG	GAC	GTC	AAG	TTC	CCG	GGT	GGC	GGT	CAG	ATC	2025
680															690
V	G	G	V	Y	L	L	P	R	R	G	P	R	L	G	
GTT	GGT	GGA	GTT	TAC	TTG	TTG	CCG	CGC	AGG	GGC	CCT	AGA	TTG	GGT	2070
700															
V	L	A	T	R	K	T	S	P	I	P	K	A	R	R	
GTG	CTC	GCG	ACG	AGA	AAG	ACT	TCC	CCT	ATC	CCC	AAG	GCT	CGT	CGG	2115
710															720
P	E	G	R	T	W	A	Q	P	G	Y	P	W	P	L	
CCC	GAG	GGC	AGG	ACC	TGG	GCT	CAG	CCC	GGT	TAC	CCT	TGG	CCC	CTC	2160
730															
Y	G	N	K	D	R	R	S	T	G	K	S	W	G	K	
TAT	GGC	AAT	AAG	GAC	AGA	CGG	TCT	ACA	GGT	AAG	TCC	TGG	GGT	AAG	2205
740															750
P	G	Y	P	W	P	R	K	T	K	R	N	T	N	R	
CCA	GGG	TAC	CCT	TGG	CCA	AGA	AAG	ACC	AAA	CGT	AAC	ACC	AAC	CGG	2250
760															
R	P	Q	D	V	K	F	P	G	G	G	Q	I	V	G	
CGG	CCG	CAG	GAC	GTC	AAG	TTC	CCG	GGT	GGC	GGT	CAG	ATC	GTT	GGT	2295
770															780
G	V	Y	L	L	P	R	R	G	P	R	L	G	V	L	
GGA	GTT	TAC	TTG	TTG	CCG	CGC	AGG	GGC	CCT	AGA	TTG	GGT	GTG	CTC	2340
790															
A	T	R	K	T	S	P	I	P	K	A	R	R	P	E	
GCG	ACG	AGA	AAG	ACT	TCC	CCT	ATC	CCC	AAG	GCT	CGT	CGG	CCC	GAG	2385

FIG. 6E

				800											810	
G	R	T	W	A	Q	P	G	Y	P	W	P	L	Y	G		
GGC	AGG	ACC	TGG	GCT	CAG	CCC	GGT	TAC	CCT	TGG	CCC	CTC	TAT	GGC	2430	
									820							
N	K	D	R	R	S	T	G	K	S	W	G	K	P	G		
AA'T	AAG	GAC	AGA	CGG	TCT	ACA	GGT	AAG	TCC	TGG	GGT	AAG	CCA	GGG	2475	
				829												
Y	P	W	P	OC												
TAC	CCT	TGG	CCC	TAA	TGAGTCGAC											

FIG. 6F

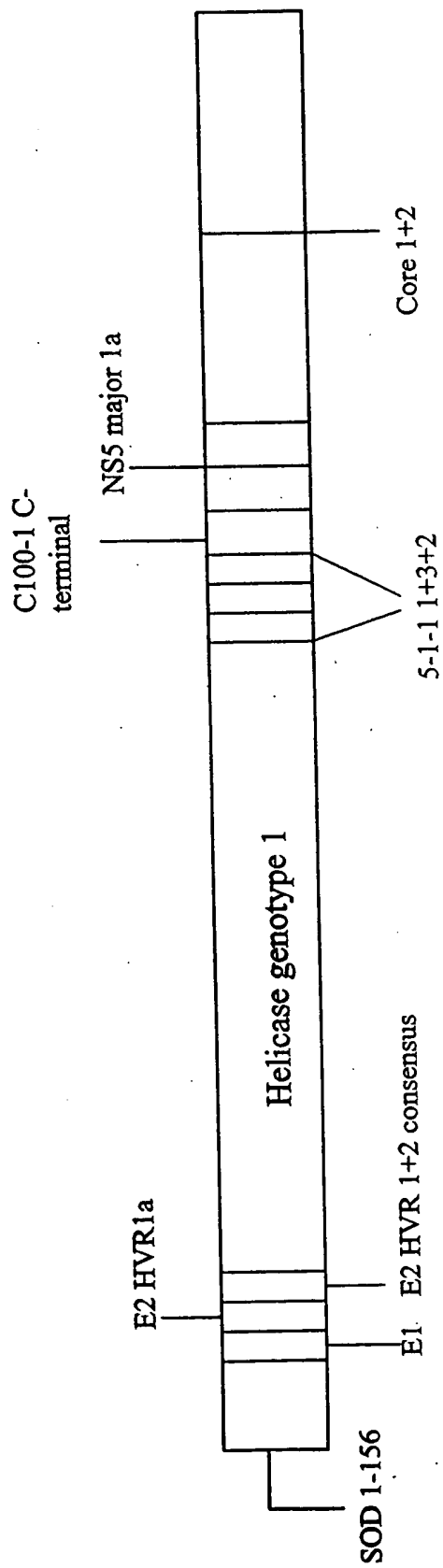


FIG. 7

1										10							
M	A	T	K	A	V	C	V	L	K	G	D	G	P	V			
ATG	GCT	ACA	AAG	GCT	GTT	TGT	GTT	TTG	AAG	GGT	GAC	GGC	CCA	GTT			
				20											30		
Q	G	I	I	N	F	E	Q	K	E	S	N	G	P	V			
CAA	GGT	ATT	ATT	AAC	TTC	GAG	CAG	AAG	GAA	AGT	AAT	GGA	CCA	GTG			
									40								
K	V	W	G	S	I	K	G	L	T	E	G	L	H	G			
AAG	GTG	TGG	GGA	AGC	ATT	AAA	GGA	CTG	ACT	GAA	GGC	CTG	CAT	GGA			
				50											60		
F	H	V	H	E	F	G	D	N	T	A	G	C	T	S			
TTC	CAT	GTT	CAT	GAG	TTT	GGA	GAT	AAT	ACA	GCA	GGC	TGT	ACC	AGT			
									70								
A	G	P	H	F	N	P	L	S	R	K	H	G	G	P			
GCA	GGT	CCT	CAC	TTT	AAT	CCT	CTA	TCC	AGA	AAA	CAC	GGT	GGG	CCA			
				80											90		
K	D	E	E	R	H	V	G	D	L	G	N	V	T	A			
AAG	GAT	GAA	GAG	AGG	CAT	GTT	GGA	GAC	TTG	GGC	AAT	GTG	ACT	GCT			
									100								
D	K	D	G	V	A	D	V	S	I	E	D	S	V	I			
GAC	AAA	GAT	GGT	GTG	GCC	GAT	GTG	TCT	ATT	GAA	GAT	TCT	GTG	ATC			
				110											120		
S	L	S	G	D	H	C	I	I	G	R	T	L	V	V			
TCA	CTC	TCA	GGA	GAC	CAT	TGC	ATC	ATT	GGC	CGC	ACA	CTG	GTG	GTC			
									130								
H	E	K	A	D	D	L	G	K	G	G	N	E	E	S			
CAT	GAA	AAA	GCA	GAT	GAC	TTG	GGC	AAA	GGT	GGA	AAT	GAA	GAA	AGT			
				140											150		
T	K	T	G	N	A	G	S	R	L	A	C	G	V	I			
ACA	AAG	ACA	GGA	AAC	GCT	GGA	AGT	CGT	TTG	GCT	TGT	GGT	GTA	ATT			
									160								
G	I	A	Q	N	L	N	S	G	C	N	C	S	I	Y			
GGG	ATC	GCC	CAG	AAT	TTG	AAT	TCT	GGT	TGC	AAT	TGC	TCT	ATC	TAT			
				170											180		
P	G	H	I	T	G	H	R	M	A	W	K	L	G	S			
CCC	GGC	CAT	ATA	ACG	GGT	CAC	CGC	ATG	GCA	TGG	AAG	CTT	GGT	TCC			
									190								
A	A	R	T	T	S	G	F	V	S	L	F	A	P	G			
GCC	GCC	AGA	ACT	ACC	TCG	GGC	TTT	GTC	TCC	TTG	TTC	GCC	CCA	GGT			

FIG. 8A

200 210
 A K Q N E T H V T G G A A A R
 GCC AAA CAA AAC GAA ACT CAC GTC ACG GGA GGC GCA GCC GCC CGA

220
 T T S G L T S L F S P G A S Q
 ACT ACG TCT GGG TTG ACC TCT TTG TTC TCC CCA GGT GCC AGC CAA

230 240
 N I Q L I V D F I P V E N L E
 AAC ATT CAA TTG ATT GTC GAC TTT ATC CCT GTG GAG AAC CTA GAG

250
 T T M R S P V F T D N S S P P
 ACA ACC ATG CGA TCT CCG GTG TTC ACG GAT AAC TCC TCT CCA CCA

260 270
 V V P Q S F Q V A H L H A P T
 GTA GTG CCC CAG AGC TTC CAG GTG GCT CAC CTC CAT GCT CCC ACA

280
 G S G K S T K V P A A Y A A Q
 GGC AGC GGC AAA AGC ACC AAG GTC CCG GCT GCA TAT GCA GCT CAG

290 300
 G Y K V L V L N P S V A A T L
 GGC TAT AAG GTG CTA GTA CTC AAC CCC TCT GTT GCT GCA ACA CTG

310
 G F G A Y M S K A H G I D P N
 GGC TTT GGT GCT TAC ATG TCC AAG GCT CAT GGG ATC GAT CCT AAC

320 330
 I R T G V R T I T T G S P I T
 ATC AGG ACC GGG GTG AGA ACA ATT ACC ACT GGC AGC CCC ATC ACG

340
 Y S T Y G K F L A D G G C S G
 TAC TCC ACC TAC GGC AAG TTC CTT GCC GAC GGC GGG TGC TCG GGG

350 360
 G A Y D I I I C D E C H S T D
 GGC GCT TAT GAC ATA ATA ATT TGT GAC GAG TGC CAC TCC ACG GAT

370
 A T S I L G I G T V L D Q A E
 GCC ACA TCC ATC TTG GGC ATT GGC ACT GTC CTT GAC CAA GCA GAG

380 390
 T A G A R L V V L A T A T P P
 ACT GCG GGG GCG AGA CTG GTT GTG CTC GCC ACC GCC ACC CCT CCG

400
 G S V T V P H P N I E E V A L
 GGC TCC GTC ACT GTG CCC CAT CCC AAC ATC GAG GAG GTT GCT CTG

410 420

FIG. 8B

S T T G E I P F Y G K A I P L
TCC ACC ACC GGA GAG ATC CCT TTT TAC GGC AAG GCT ATC CCC CTC

430
E V I K G G R H L I F C H S K
GAA GTA ATC AAG GGG GGG AGA CAT CTC ATC TTC TGT CAT TCA AAG

440 450
K K C D E L A A K L V A L G I
AAG AAG TGC GAC GAA CTC GCC GCA AAG CTG GTC GCA TTG GGC ATC

460
N A V A Y Y R G L D V S V I P
AAT GCC GTG GCC TAC TAC CGC GGT CTT GAC GTG TCC GTC ATC CCG

470 480
T S G D V V V V A T D A L M T
ACC AGC GGC GAT GTT GTC GTC GTG GCA ACC GAT GCC CTC ATG ACC

490
G Y T G D F D S V I D C N T C
GGC TAT ACC GGC GAC TTC GAC TCG GTG ATA GAC TGC AAT ACG TGT

500 510
V T Q T V D F S L D P T F T I
GTC ACC CAG ACA GTC GAT TTC AGC CTT GAC CCT ACC TTC ACC ATT

520
E T I T L P Q D A V S R T Q R
GAG ACA ATC ACG CTC CCC CAA GAT GCT GTC TCC CGC ACT CAA CGT

530 540
R G R T G R G K P G I Y R F V
CGG GGC AGG ACT GGC AGG GGG AAG CCA GGC ATC TAC AGA TTT GTG

550
A P G E R P S G M F D S S V L
GCA CCG GGG GAG CGC CCC TCC GGC ATG TTC GAC TCG TCC GTC CTC

560 570
C E C Y D A G C A W Y E L T P
TGT GAG TGC TAT GAC GCA GGC TGT GCT TGG TAT GAG CTC ACG CCC

580
A E T T V R L R A Y M N T P G
GCC GAG ACT ACA GTT AGG CTA CGA GCG TAC ATG AAC ACC CCG GGG

590 600
L P V C Q D H L E F W E G V F
CTT CCC GTG TGC CAG GAC CAT CTT GAA TTT TGG GAG GGC GTC TTT

610
T G L T H I D A H F L S Q T K
ACA GGC CTC ACT CAT ATA GAT GCC CAC TTT CTA TCC CAG ACA AAG

620 630
Q S G E N L P Y L V A Y Q A T

FIG. 8C

CAG AGT GGG GAG AAC CTT CCT TAC CTG GTA GCG TAC CAA GCC ACC

640

V C A R A Q A P P P S W D Q M
GTG TGC GCT AGG GCT CAA GCC CCT CCC CCA TCG TGG GAC CAG ATG

650

W K C L I R L K P T L H G P T
TGG AAG TGT TTG ATT CGC CTC AAG CCC ACC CTC CAT GGG CCA ACA

670

P L L Y R L G A V Q N E I T L
CCC CTG CTA TAC AGA CTG GGC GCT GTT CAG AAT GAA ATC ACC CTG

680

T H P V T K Y I M T C M S A D
ACG CAC CCA GTC ACC AAA TAC ATC ATG ACA TGC ATG TCG GCC GAC

690

700

L E V V T S A C S G K P A I I
CTG GAG GTC GTC ACG AGC GCA TGC TCC GGG AAG CCG GCA ATC ATA

710

P D R E V L Y R E F D E M E E
CCT GAC AGG GAA GTC CTC TAC CGA GAG TTC GAT GAG ATG GAA GAG

720

730

C S Q H L P Y I E Q G M M L A
TGC TCT CAG CAC TTA CCG TAC ATC GAG CAA GGG ATG ATG CTC GCC

740

E Q F K Q K A L G L S R G G K
GAG CAG TTC AAG CAG AAG GCC CTC GGC CTC TCG CGA GGG GGC AAG

750

760

P A I V P D K E V L Y Q Q Y D
CCG GCA ATC GTT CCA GAC AAA GAG GTG TTG TAT CAA CAA TAC GAT

770

E M E E C S Q A A P Y I E Q A
GAG ATG GAA GAG TGC TCA CAA GCT GCC CCA TAT ATC GAA CAA GCT

780

790

Q V I A H Q F K E K V L G L I
CAG GTA ATA GCT CAC CAG TTC AAG GAA AAA GTC CTT GGA TTG ATC

800

D N D Q V V V T P D K E I L Y
GAT AAT GAT CAA GTG GTT GTG ACT CCT GAC AAA GAA ATC TTA TAT

810

820

E A F D E M E E C A S K A A L
GAG GCC TTT GAT GAG ATG GAA GAA TGC GCC TCC AAA GCC GCC CTC

830

I E E G Q R M A E M L K S K I
ATT GAG GAA GGG CAG CGG ATG GCG GAG ATG CTC AAG TCT AAG ATA

840

FIG. 8D

850
 Q G L L G I L R R H V G P G E
 CAA GGC CTC CTC GGG ATA CTG CGC CGG CAC GTT GGT CCT GGC GAG

860 870
 G A V Q W M N R L I A F A S R
 GGG GCA GTG CAG TGG ATG AAC CGG CTG ATA GCC TTC GCC TCC AGA

880
 G N H V S P T H Y V P S R S R
 GGG AAC CAT GTT TCC CCC ACG CAC TAC GTT CCG TCT AGA TCC CGG

890 900
 R F A Q A L P V W A R P D Y N
 AGA TTC GCC CAG GCC CTG CCC GTT TGG GCG CGG CCG GAC TAT AAC

910
 P P L V E T W K K P D Y E P P
 CCC CCG CTA GTG GAG ACG TGG AAA AAG CCC GAC TAC GAA CCA CCT

920 930
 V V H G R S S R R F A Q A L P
 GTG GTC CAC GGC AGA TCT TCT CGG AGA TTC GCC CAG GCC CTG CCC

940
 V W A R P D Y N P P L V E T W
 GTT TGG GCG CGG CCG GAC TAT AAC CCC CCG CTA GTG GAG ACG TGG

950 960
 K K P D Y E P P V V H G R K T
 AAA AAG CCC GAC TAC GAA CCA CCT GTG GTC CAT GGC AGA AAG ACC

970
 K R N T N R R P Q D V K F P G
 AAA CGT AAC ACC AAC CGG CGG CCG CAG GAC GTC AAG TTC CCG GGT

980 990
 G G Q I V G R R G P P I P K A
 GGC GGT CAG ATC GTT GGT CGC AGG GGC CCT CCT ATC CCC AAG GCT

1000
 R R P E G R T W A Q P G Y P W
 CGT CGG CCC GAG GGC AGG ACC TGG GCT CAG CCC GGT TAC CCT TGG

1010 1020
 P L Y G N K D R R S T G K S W
 CCC CTC TAT GGC AAT AAG GAC AGA CGG TCT ACA GGT AAG TCC TGG

1030
 G K P G Y P W P R K T K R N T
 GGT AAG CCA GGG TAC CCT TGG CCA AGA AAG ACC AAA CGT AAC ACC

1040 1050
 N R R P Q D V K F P G G G Q I
 AAC CGA CGG CCG CAG GAC GTC AAG TTC CCG GGT GGC GGT CAG ATC

FIG. 8E

1060
 V G R R G P P I P K A R R P E
 GTT GGT CGC AGG GGC CCT CCT ATC CCC AAG GCT CGT CGG CCC GAG

1070 1080
 G R T W A Q P G Y P W P L Y G
 GGC AGG ACC TGG GCT CAG CCC GGT TAC CCT TGG CCC CTC TAT GGC

1090
 N K D R R S T G K S W G K P G
 AAT AAG GAC AGA CGG TCT ACC GGT AAG TCC TGG GGT AAG CCA GGG

1099
 Y P W P
 TAT CCT TGG CCC

FIG. 8F

MEFA-3 ANTIGEN

hSOD- (1-154)	CORE	CORE	c33c	5-1-1 type 1	5-1-1 type 3	5-1-1 type 2	C-100	C-100	NS5	NS5
10	10	1192	1694	1694	1694	1694	1901	1901	2278	2278
53	53	1457	1735	1735	1735	1735	1940	1940	2310	2310
AMINO ACIDS										

A

MEFA-5 ANTIGEN

hSOD- (1-154)	CORE	CORE	E1	E2	c33c	5-1-1 type 1	5-1-1 type 3	5-1-1 type 2	C-100	NS5	NS5
10	10	303	405	1192	1689	1689	1689	1689	1901	2278	2278
53	53	320	444	1457	1735	1735	1735	1735	1940	2313	2313
AMINO ACIDS											

B

MEFA-6 ANTIGEN

hSOD- (1-154)	E1	E2	c33c	5-1-1 type 1	5-1-1 type 3	5-1-1 type 2	C-100	NS5	NS5	CORE	CORE
303	405	1192	1689	1689	1689	1689	1901	2278	2278	10	10
320	444	1457	1735	1735	1735	1735	1940	2313	2313	53	53
AMINO ACIDS											

C

FIG. 9